RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____ 10/549, 592 _____

Source: _____ PCT _____

Date Processed by STIC: _____ 10/03/2005 _____

ENTERED

PCT

RAW SEQUENCE LISTING   DATE: 10/03/2005
PATENT APPLICATION: US/10/549,592   TIME: 14:15:41

Input Set : **A:\Sequence Listing ASCII, Docket No. 0609.5150000.ST25.txt**
Output Set: **N:\CRF4\10032005\J549592.raw**

```
   3 <110> APPLICANT: Gardella, PhD, Thomas J.
   4       Potts, John T.
   5       Kronenberg, H.M.
   6       Shimizu, N.
   7       Carter, P.
   9 <120> TITLE OF INVENTION: Conformationally Constrained Parathyroid Hormones With
  10       Alpha Helix Stabilizers
  12 <130> FILE REFERENCE: 0609.515PC00
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/549,592
C--> 14 <141> CURRENT FILING DATE: 2005-09-19
  14 <160> NUMBER OF SEQ ID NOS: 52
  16 <170> SOFTWARE: PatentIn version 3.2
  18 <210> SEQ ID NO: 1
  19 <211> LENGTH: 14
  20 <212> TYPE: PRT
  21 <213> ORGANISM: Artificial Sequence
  23 <220> FEATURE:
  24 <223> OTHER INFORMATION: Mutated hPTH
  27 <220> FEATURE:
  28 <221> NAME/KEY: MISC_FEATURE
  29 <222> LOCATION: (1)..(1)
  30 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Gly,
Ser or
  31       Ala
  33 <220> FEATURE:
  34 <221> NAME/KEY: MISC_FEATURE
  35 <222> LOCATION: (1)..(14)
  36 <223> OTHER INFORMATION: At least one Xaa is an alpha helix stabilizing residue
  38 <220> FEATURE:
  39 <221> NAME/KEY: MISC_FEATURE
  40 <222> LOCATION: (1)..(14)
  41 <223> OTHER INFORMATION: At least one Xaa is 1 aminocyclopropane 1 carboxylic acid,
  42       1 amino cyclobutane carboxylic acid,
  43       1 aminocyclopentane 1 carboxylic acid,
  44       1 amino cyclohexane carboxylic acid or alpha, alpha diethylglycine
  47 <220> FEATURE:
  48 <221> NAME/KEY: MISC_FEATURE
  49 <222> LOCATION: (1)..(14)
  50 <223> OTHER INFORMATION: At least one Xaa is 1 aminocyclopropane 1 carboxylic acid,
  51       1 amino cyclobutane carboxylic acid,
  52       1 aminocyclopentane 1 carboxylic acid, 1 amino cyclohexane
  53       carboxylic acid or alpha, alpha diethylglycine
  55 <220> FEATURE:
  56 <221> NAME/KEY: MISC_FEATURE
```

```
      57 <222> LOCATION: (3)..(3)
      58 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Ala or
Ser
      60 <220> FEATURE:
      61 <221> NAME/KEY: MISC_FEATURE
      62 <222> LOCATION: (10)..(10)
      63 <223> OTHER INFORMATION: Xaa can represent Ala, Gln or Asn
      65 <220> FEATURE:
      66 <221> NAME/KEY: MISC_FEATURE
      67 <222> LOCATION: (11)..(11)
      68 <223> OTHER INFORMATION: Xaa can represent Arg, Har or Leu
      70 <220> FEATURE:
      71 <221> NAME/KEY: MISC_FEATURE
      72 <222> LOCATION: (12)..(12)
      73 <223> OTHER INFORMATION: Xaa can represent alpha helix stabilizing residue, Ala or Gly
      75 <220> FEATURE:
      76 <221> NAME/KEY: MISC_FEATURE
      77 <222> LOCATION: (13)..(13)
      78 <223> OTHER INFORMATION: Xaa can represent alpha helix stabilizing residue or Lys
      80 <220> FEATURE:
      81 <221> NAME/KEY: MISC_FEATURE
      82 <222> LOCATION: (14)..(14)
      83 <223> OTHER INFORMATION: Xaa can represent alpha helix stabilizing residue, Trp or His
      85 <220> FEATURE:
      86 <221> NAME/KEY: MOD_RES
      87 <222> LOCATION: (14)..(14)
      88 <223> OTHER INFORMATION: AMIDATION
      90 <400> SEQUENCE: 1
W-->  92 Xaa Val Xaa Glu Ile Gln Leu Met His Xaa Xaa Xaa Xaa Xaa
      93 1               5                   10
      96 <210> SEQ ID NO: 2
      97 <211> LENGTH: 14
      98 <212> TYPE: PRT
      99 <213> ORGANISM: Artificial Sequence
     101 <220> FEATURE:
     102 <223> OTHER INFORMATION: Mutated hPTH
     105 <220> FEATURE:
     106 <221> NAME/KEY: MISC_FEATURE
     107 <222> LOCATION: (1)..(1)
     108 <223> OTHER INFORMATION: Xaa can represent an alpha stabilizing residue, Gly, Ser or
Ala
     110 <220> FEATURE:
     111 <221> NAME/KEY: MISC_FEATURE
     112 <222> LOCATION: (1)..(3)
     113 <223> OTHER INFORMATION: At least one Xaa is an alpha helix stabilizing residue
     115 <220> FEATURE:
     116 <221> NAME/KEY: MISC_FEATURE
     117 <222> LOCATION: (1)..(3)
     118 <223> OTHER INFORMATION: At least one Xaa is 1 aminocyclopropane 1 carboxylic acid,
     119         1 amino cyclobutane carboxylic acid,
     120         1 aminocyclopentane 1 carboxylic acid,
```

```
 121         1 amino cyclohexane carboxylic acid or alpha, alpha diethylglycine
 124 <220> FEATURE:
 125 <221> NAME/KEY: MISC_FEATURE
 126 <222> LOCATION: (3)..(3)
 127 <223> OTHER INFORMATION: Xaa can represent an alpha stabilizing residue, Ala or Ser
 129 <220> FEATURE:
 130 <221> NAME/KEY: MISC_FEATURE
 131 <222> LOCATION: (11)..(11)
 132 <223> OTHER INFORMATION: Xaa represents homoarginine
 134 <220> FEATURE:
 135 <221> NAME/KEY: MOD_RES
 136 <222> LOCATION: (14)..(14)
 137 <223> OTHER INFORMATION: AMIDATION
 139 <400> SEQUENCE: 2
```
W--> 141 Xaa Val Xaa Glu Ile Gln Leu Met His Gln Xaa Ala Lys Trp
```
 142 1               5                   10
 145 <210> SEQ ID NO: 3
 146 <211> LENGTH: 14
 147 <212> TYPE: PRT
 148 <213> ORGANISM: Artificial Sequence
 150 <220> FEATURE:
 151 <223> OTHER INFORMATION: [Aib 1,3, M]PTH(1 14)
 154 <220> FEATURE:
 155 <221> NAME/KEY: MISC_FEATURE
 156 <222> LOCATION: (1)..(1)
 157 <223> OTHER INFORMATION: Xaa represents alpha aminoisobutyric acid
 159 <220> FEATURE:
 160 <221> NAME/KEY: MISC_FEATURE
 161 <222> LOCATION: (3)..(3)
 162 <223> OTHER INFORMATION: Xaa represents alpha aminoisobutyric acid
 164 <220> FEATURE:
 165 <221> NAME/KEY: MISC_FEATURE
 166 <222> LOCATION: (11)..(11)
 167 <223> OTHER INFORMATION: Xaa represents homoarginine
 169 <220> FEATURE:
 170 <221> NAME/KEY: MOD_RES
 171 <222> LOCATION: (14)..(14)
 172 <223> OTHER INFORMATION: AMIDATION
 174 <400> SEQUENCE: 3
```
W--> 176 Xaa Val Xaa Glu Ile Gln Leu Met His Gln Xaa Ala Lys Trp
```
 177 1               5                   10
 180 <210> SEQ ID NO: 4
 181 <211> LENGTH: 14
 182 <212> TYPE: PRT
 183 <213> ORGANISM: Artificial Sequence
 185 <220> FEATURE:
 186 <223> OTHER INFORMATION: [Ac5c 1, M]PTH(1 14)
 189 <220> FEATURE:
 190 <221> NAME/KEY: MISC_FEATURE
```

```
191 <222> LOCATION: (1)..(1)
192 <223> OTHER INFORMATION: Xaa represents 1 aminocyclopentane 1 carboxylic acid
194 <220> FEATURE:
195 <221> NAME/KEY: MISC_FEATURE
196 <222> LOCATION: (11)..(11)
197 <223> OTHER INFORMATION: Xaa represents homoarginine
199 <220> FEATURE:
200 <221> NAME/KEY: MOD_RES
201 <222> LOCATION: (14)..(14)
202 <223> OTHER INFORMATION: AMIDATION
204 <400> SEQUENCE: 4
```

W--> **206 Xaa Val Ala Glu Ile Gln Leu Met His Gln Xaa Ala Lys Trp**

```
207 1             5                  10
210 <210> SEQ ID NO: 5
211 <211> LENGTH: 14
212 <212> TYPE: PRT
213 <213> ORGANISM: Artificial Sequence
215 <220> FEATURE:
216 <223> OTHER INFORMATION: Mutated hPTH
219 <220> FEATURE:
220 <221> NAME/KEY: MISC_FEATURE
221 <222> LOCATION: (1)..(1)
222 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Gly,
Ser or
223         Ala
225 <220> FEATURE:
226 <221> NAME/KEY: MISC_FEATURE
227 <222> LOCATION: (1)..(14)
228 <223> OTHER INFORMATION: At least one Xaa is an alpha helix stabilizing residue
230 <220> FEATURE:
231 <221> NAME/KEY: MISC_FEATURE
232 <222> LOCATION: (1)..(14)
233 <223> OTHER INFORMATION: At least one Xaa is 1 aminocyclopropane 1 carboxylic acid,
234         1 amino cyclobutane carboxylic acid,
235         1 aminocyclopentane 1 carboxylic acid, 1 amino cyclohexane
236         carboxylic acid or alpha, alpha diethylglycine
238 <220> FEATURE:
239 <221> NAME/KEY: MISC_FEATURE
240 <222> LOCATION: (3)..(3)
241 <223> OTHER INFORMATION: Xaa can represent alpha helix stabilizing residue, Ala or
Ser
243 <220> FEATURE:
244 <221> NAME/KEY: MISC_FEATURE
245 <222> LOCATION: (6)..(6)
246 <223> OTHER INFORMATION: Xaa can represent Ala, Gln or Asn
248 <220> FEATURE:
249 <221> NAME/KEY: MISC_FEATURE
250 <222> LOCATION: (10)..(10)
251 <223> OTHER INFORMATION: Xaa can represent Ala, Gln or Asn
253 <220> FEATURE:
254 <221> NAME/KEY: MISC_FEATURE
```

```
     255 <222> LOCATION: (11)..(11)
     256 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Har or
Arg
     258 <220> FEATURE:
     259 <221> NAME/KEY: MISC_FEATURE
     260 <222> LOCATION: (12)..(12)
     261 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue or Lys
     263 <220> FEATURE:
     264 <221> NAME/KEY: MISC_FEATURE
     265 <222> LOCATION: (14)..(14)
     266 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Trp or
His
     268 <220> FEATURE:
     269 <221> NAME/KEY: MOD_RES
     270 <222> LOCATION: (14)..(14)
     271 <223> OTHER INFORMATION: AMIDATION
     273 <400> SEQUENCE: 5
W--> 275 Xaa Val Xaa Glu Ile Xaa Leu Met His Xaa Xaa Xaa Lys Xaa
     276 1               5                  10
     279 <210> SEQ ID NO: 6
     280 <211> LENGTH: 14
     281 <212> TYPE: PRT
     282 <213> ORGANISM: Artificial Sequence
     284 <220> FEATURE:
     285 <223> OTHER INFORMATION: Mutated hPTH
     288 <220> FEATURE:
     289 <221> NAME/KEY: MISC_FEATURE
     290 <222> LOCATION: (1)..(1)
     291 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Gly,
Ser or
     292         Ala
     294 <220> FEATURE:
     295 <221> NAME/KEY: MISC_FEATURE
     296 <222> LOCATION: (1)..(14)
     297 <223> OTHER INFORMATION: At least one Xaa is 1 aminocyclopropane 1 carboxylic acid,
     298         1 amino cyclobutane carboxylic acid,
     299         1 aminocyclopentane 1 carboxylic acid, 1 amino cyclohexane
     300         carboxylic acid or alpha, alpha diethylglycine
     302 <220> FEATURE:
     303 <221> NAME/KEY: MISC_FEATURE
     304 <222> LOCATION: (3)..(3)
     305 <223> OTHER INFORMATION: Xaa can represent an alpha helix stabilizing residue, Ala or
Ser
     307 <220> FEATURE:
     308 <221> NAME/KEY: MISC_FEATURE
     309 <222> LOCATION: (11)..(11)
     310 <223> OTHER INFORMATION: Xaa represents homoarginine
     312 <220> FEATURE:
     313 <221> NAME/KEY: MOD_RES
     314 <222> LOCATION: (14)..(14)
     315 <223> OTHER INFORMATION: AMIDATION
     317 <400> SEQUENCE: 6
W--> 319 Xaa Val Xaa Glu Ile Gln Leu Met His Gln Xaa Ala Lys Trp
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/03/2005
PATENT APPLICATION: US/10/549,592   TIME: 14:15:42

Input Set : A:\Sequence Listing ASCII, Docket No. 0609.5150000.ST25.txt
Output Set: N:\CRF4\10032005\J549592.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,3,10,11,12,13,14
Seq#:2; Xaa Pos. 1,3,11
Seq#:3; Xaa Pos. 1,3,11
Seq#:4; Xaa Pos. 1,11
Seq#:5; Xaa Pos. 1,3,6,10,11,12,14
Seq#:6; Xaa Pos. 1,3,11
Seq#:7; Xaa Pos. 1,3,11
Seq#:8; Xaa Pos. 1,3,11
Seq#:9; Xaa Pos. 1,3,11
Seq#:10; Xaa Pos. 1,3,11
Seq#:11; Xaa Pos. 1,3,11
Seq#:12; Xaa Pos. 1,3,11
Seq#:13; Xaa Pos. 11
Seq#:14; Xaa Pos. 8,21
Seq#:15; Xaa Pos. 1,3,11
Seq#:16; Xaa Pos. 11
Seq#:20; Xaa Pos. 11
Seq#:21; Xaa Pos. 1,3,11
Seq#:22; Xaa Pos. 1,3
Seq#:23; Xaa Pos. 1,3,11
Seq#:24; Xaa Pos. 1,11
Seq#:25; Xaa Pos. 1,11
Seq#:27; Xaa Pos. 1,3,11
Seq#:28; Xaa Pos. 1,3,11
Seq#:29; Xaa Pos. 1,3,11
Seq#:30; Xaa Pos. 1,3
Seq#:31; Xaa Pos. 1,3
Seq#:32; Xaa Pos. 1,3
Seq#:34; Xaa Pos. 1,3
Seq#:35; Xaa Pos. 1,3
Seq#:36; Xaa Pos. 1,3,8,11
Seq#:37; Xaa Pos. 3,11
Seq#:38; Xaa Pos. 3,11
Seq#:39; Xaa Pos. 3,11
Seq#:40; Xaa Pos. 1,3,11
Seq#:41; Xaa Pos. 1,3,11
Seq#:42; Xaa Pos. 1,3,11
Seq#:43; Xaa Pos. 1,3,11
Seq#:44; Xaa Pos. 1,3,11
Seq#:45; Xaa Pos. 1,3,11
Seq#:46; Xaa Pos. 1,3,11
Seq#:47; Xaa Pos. 1,3,11
Seq#:48; Xaa Pos. 1,3,11
Seq#:49; Xaa Pos. 1,3,11

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/03/2005
PATENT APPLICATION: US/10/549,592   TIME: 14:15:42

Input Set : **A:\Sequence Listing ASCII, Docket No. 0609.5150000.ST25.txt**
Output Set: **N:\CRF4\10032005\J549592.raw**

Seq#:50; Xaa Pos. 1,3,11
Seq#:51; Xaa Pos. 1,11
Seq#:52; Xaa Pos. 1

VERIFICATION SUMMARY   DATE: 10/03/2005
PATENT APPLICATION: US/10/549,592   TIME: 14:15:42

Input Set : **A:\Sequence Listing ASCII, Docket No. 0609.5150000.ST25.txt**
Output Set: **N:\CRF4\10032005\J549592.raw**

```
L:14 M:270 C: Current Application Number differs, Replaced Current Application No
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:92 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:206 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:275 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:354 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:494 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:529 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:554 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:584 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
M:341 Repeated in SeqNo=14
L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:652 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:756 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:829 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:864 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:889 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:919 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:1005 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:1040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:1070 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:1100 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:1130 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:1180 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:1210 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:1256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0
L:1290 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:1320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0
L:1350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:1385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:1420 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:1455 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
L:1490 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:1525 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0
L:1560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0
L:1595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0
L:1630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0
L:1665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0
L:1700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:0
L:1735 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:0
```

VERIFICATION SUMMARY   DATE: 10/03/2005
PATENT APPLICATION: US/10/549,592   TIME: 14:15:42

Input Set : **A:\Sequence Listing ASCII, Docket No. 0609.5150000.ST25.txt**
Output Set: **N:\CRF4\10032005\J549592.raw**

L:1765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0
L:1790 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:0